AMENDMENTS TO THE CLAIMS

This listing of Claims shall replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A data processing pipeline comprising:

a first circuit for classifying a received data set, wherein the first circuit is operable to select a process mode for processing the received data set to reduce power consumption without significantly sacrificing quality and performance, and wherein the process mode is selected based upon a classification of the received data set; and

a second circuit coupled to the first circuit, wherein the second circuit is operable to process data received from the first circuit, and wherein processing is performed in accordance with the process mode selected by the first circuit.

2. (Previously Presented) The data processing pipeline of claim 1, wherein the second circuit comprises:

a first data processing circuit, the first data processing circuit processing data having a first classification in a low precision processing mode; and

a second data processing circuit, the second data processing circuit processing data having a second classification in a high precision processing mode.

3. (Previously Presented) The data processing pipeline of claim 2, wherein the second circuit further comprises:

a third data processing circuit coupled to the first data processing circuit, the third data processing circuit processing data having a first classification received from the first data processing circuit; and

a fourth data processing circuit coupled to the second data processing circuit, the fourth data processing circuit processing data having a second classification received from the second data processing circuit.

4. (Previously Presented) The data processing pipeline of claim 2, wherein the second circuit further comprises a third data processing circuit coupled to the first data processing circuit and the second data processing circuit, the third data processing circuit performing data processing on all data regardless of classification.

5. (Previously Presented) The data processing pipeline of claim 1, wherein the second circuit comprises a configurable data processing circuit, the configurable data processing circuit is configured based on a first classification to process data in a low precision processing mode, the configurable data processing circuit is configured based on a second classification to process data in a high precision processing mode.

6. (Previously Presented) The data processing pipeline of claim 5, wherein the second circuit further comprises a third data processing circuit coupled to the configurable data processing circuit, the third data processing circuit performing data processing on all data regardless of classification.

7. (Original) The data processing pipeline of claim 6 further comprising a user interface coupled to the first circuit, the user interface communicating input

information by a user to the first circuit to configure the configurable data processing circuit to operate in a desired precision operating mode.

8. (Original) The data processing pipeline of claim 7, wherein the desired precision mode selected by the user overrides the precision mode selected by the first circuit.

9. (Original) The data processing pipeline of claim 6 further comprising a power monitor coupled to the first circuit, the power monitor determining a power level needed to ensure continuing operation of a portable hand-held device until a conclusion of an actively running application and selecting an appropriate precision operating mode, the power monitor communicating the determined precision operating mode to the first circuit to configure the configurable data processing circuit to operate in the selected precision operating mode.

10. (Original) The data processing pipeline of claim 9, wherein the selected precision mode overrides the precision mode selected by the first circuit.

11. (Original) The data processing pipeline of claim 4 further comprising a user interface coupled to the first circuit, the user interface communicating input information by a user to the first circuit to configure the configurable data processing circuit to operate in a desired precision operating mode.

12. (Original) The data processing pipeline of claim 11, wherein the desired precision mode selected by the user overrides the precision mode selected by the first circuit.

13. (Original) The data processing pipeline of claim 4 further comprising a power monitor coupled to the first circuit, the power monitor determining a power level needed to ensure continuing operation of a portable hand-held device until a conclusion of an actively running application and selecting an appropriate precision operating mode, the power monitor communicating the determined precision operating mode to the first circuit to configure the configurable data processing circuit to operate in the selected precision operating mode.

14. (Original) The data processing pipeline of claim 13, wherein the power monitor makes the determination by comparing an indicator of available power with an indicator of remaining operating time of the actively running application.

15-56. (Cancelled) (Restriction)

57. (Previously Presented) A method for processing data comprising:

classifying a data set into a classification; and

based on the classification, selecting a processing mode to process the data set to reduce power consumption without significantly sacrificing quality and performance.

58. (Previously Presented) A method for processing graphics comprising:

classifying a primitive into a classification based on its size and other characteristics; and

based on the classification, selecting a processing mode to compute setup equations for the primitive to reduce power consumption without significantly sacrificing quality and performance.

59. (Previously Presented) The method of claim 58, wherein the primitive is classified as small and well-behaved, large, or misbehaved.

60. (Original) The method of claim 58, wherein classification criteria for the other characteristics include texture, width, and depth.

61. (Previously Presented) The method of Claim 60, wherein a low precision processing mode is used for a primitive classified as small and well-behaved and a high precision processing mode is used for a primitive classified as large or misbehaved.

62. (Original) The method of claim 61, further comprising:

receiving input information from a user; and

selecting a desired precision operating mode based on the input information.

63. (Original) The method of claim 62, wherein the desired precision mode selected by the user overrides the precision mode selected by the primitive classification step.

64. (Previously Presented) The method of claim 61 further comprising:

determining a power level needed to ensure continuing operation of a portable hand-held device until a conclusion of an actively running application; and

selecting an appropriate precision operating mode based on the power level determined.

65. (Original) The method of claim 64, wherein the determination is carried out by comparing an indicator of available power with an indicator of remaining operating time of the actively running application.

66. (Original) The method claim 65, wherein the selected precision mode overrides the precision mode selected by the primitive classification step.

67. (Previously Presented) A data processing pipeline comprising:

a first circuit for classifying individual primitives of a received data set based on a prescribed criterion between a first primitive type and a second primitive type, said first circuit further operable to assign primitives of said first primitive type to a first process mode and said first circuit further operable to assign primitives of said second primitive type to a second process mode wherein said first process mode reduces power consumption; and

a second circuit coupled to said first circuit and for processing primitives of said received data set according to a process mode assigned by said first circuit.

68. (Previously Presented) The data processing pipeline of Claim 67, wherein primitives of said first primitive type comprise small primitives.

69. (Previously Presented) The data processing pipeline of Claim 68, wherein said primitives of said first primitive type further comprise well-behaved primitives.

70. (Previously Presented) The data processing pipeline of Claim 67, wherein said second circuit comprises a low-precision and low-power consumption

processing circuit for processing primitives of said first primitive type according to said first process mode.

71. (Previously Presented) The data processing pipeline of Claim 70, wherein said second circuit further comprises a high-precision processing circuit for processing primitives of said second primitive type according to said second process mode.

72. (Previously Presented) The data processing pipeline of Claim 67, wherein said first circuit comprises a primitive setup engine and wherein said second circuit comprises at least one of a rendering engine and rasterization engine.

73. (Previously Presented) The data processing pipeline of Claim 67, wherein said prescribed criterion specifies primitives that can be rendered with low-precision without significant loss of quality.